
XIX. *On Chamæmeles coriacea and Sempervivum glutinosum.*
By the Rev. R. T. Lowe, B.A. Travelling Bachelor to the University of Cambridge. Communicated by Francis Boott, M.D. F.L.S.

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IN the 13th volume of the *Linnean Transactions*, Mr. Lindley has described, under the name of *Chamæmeles coriacea*, a plant which was originally discovered by Masson in Madeira, and named *Cratægus coriacea*. This description appears to be the only one, founded upon an examination of specimens, in existence; the accounts given by DeCandolle and Sprengel in their latest works being apparently wholly derived from it, and not claiming to rank as independent descriptions by furnishing any fresh or additional particulars of their own. It may therefore be inferred that the plant is of sufficient rarity to render the completion of its history a matter of interest. This must be my apology for undertaking the task without having it in my power to consult Mr. Lindley's original paper and description; for which reason I shall confine myself principally in this place to an account of the fruit, which, not being mentioned by DeCandolle and only guessed at by Sprengel, seems to have remained hitherto unknown. The present description then is to be considered in the light of a supplement to the original observations and description of Mr. Lindley; on which account I am desirous it should be honoured by a place in the *Transactions* of the Society in which they have already appeared.

C. coriacea is one of the rarest plants in Madeira ; and at present I am only acquainted with one locality for it. This is on the sea-cliffs to the eastward of Funchal, about a mile out of the town along the Caniço road. As this is a direction very likely to be taken in a short botanical ramble by a casual visitor, it might well be supposed by such a person that the plant was far more common than a longer residence would discover to be the case. It grows at the summit on the extreme verge of the cliff (in this place about two hundred or three hundred feet high), or on its perpendicular face a little lower down, forming a thick evergreen bush about four or five feet high, with something of the habit of the pomegranate (*Punica Granatum*). The soil (if soil it can be called) an arid crumbling tufa, mixed with basaltic debris. The flowers are produced abundantly in the months of December, January, or February, according to the earliness of the autumnal rains. Very few of them come to perfection, and the fruit is not ripe before the following November or December. It is indeed so rarely perfected, that from the whole of the bushes, five or six in number, which had been covered the same month of the preceding year with a profusion of flowers, I only obtained, last December, eleven in a full-grown ripe state.

When thus mature, the fruit or haw is quite smooth and even, of a globose-oblong subpyriform shape, flattened or truncate at the apex, and depressed or with a small hollow in the centre, which is nearly covered and concealed by the converging, withered and blackened, or discoloured segments of the calyx. It is about the size of the fruit of *Cratægus oxyacantha*, which indeed it exactly resembles externally in every thing but colour ; this being in the present plant, when fully ripe, pale yellowish-white, or rather a rich cream-colour. Length, at most half an inch ; breadth, three-eighths. Flesh (*sarcocarpium*) thick, i. e. a little

little more than one-sixteenth of an inch ; mealy, rather dry and insipid, much resembling in flavour the fruit of *C. oxyacantha*, but rather bitter. When first cut or broken, the flesh is quite white internally, but changes almost immediately to a reddish rusty-brown if the cut or fracture be transverse, not so remarkably if otherwise : it invests an uniformly single, one-celled *carpell*, of an ovate or rather oval form and smooth, i. e. not in any way conspicuously furrowed or even rough, with a slightly prominent suture up one side ; but in all states perfectly closed, and not bursting or splitting open. The substance of this (the *endocarpium*) is of irregular thickness, very hard and bony. Seed single, erect, narrow-elliptic, narrowing at each end, and even pointed at the upper ; invested with a thin light-brown skin (*spermodermium*). Its substance (*amygdala*) is pale greenish internally ; and a transverse section shows it to be beautifully convolute spirally, or composed of two leaves or laminæ applied face to face and rolled together spirally in a longitudinal direction.

The above is extracted nearly verbatim from notes made on the fresh fruit ; but in more botanical language it will stand thus :

Fructus : pomum calyce baccato carpelloque solitario constans.

Epicarpium glabrum, tenue.

Sarcocarpium crassiusculum, farinoso-carnosum, subsiccum, endocarpio adhærens.

Endocarpium uniloculare, indehiscens, clausum, osseum, durum, crassiusculum, glabrum, suturâ distinctâ, monospermum : semine erecto.

Spermodermium tenue, glabrum, membranaceum.

Amygdala : cotyledonibus foliaceis, contiguis, convolutis.

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By a misapprehension, easily accounted for, it has been stated that this plant is called "*Buxo*" in Madeira. It is not uncommon here, as perhaps elsewhere, with a countryman when hard pressed for a name, to conceal his ignorance by coining an extempore one for the occasion; or rather, possibly, by taking the first that occurs of some similar object or plant. In the case of the present plant, it is therefore probable that some countryman who was applied to for its Portuguese name, misled by a fancied resemblance, really mistook it for the *Buxo*; which, as any common Portuguese Dictionary will confirm, is the common garden Box (*Buxus sempervirens*). Misled myself by the above statement given in DeCandolle's *Prodromus*, on my first arrival here I made all possible inquiry after the *Buxo* of Madeira; and the result of every requisition for a supply, never failed to be a huge bunch of common Box, or *Buxus sempervirens*, procured from some garden, of all which in Madeira it is a favourite and constant inmate. Various disappointments of this sort confirmed a suspicion, entertained from the first, of the improbability that the common and well-known name *Buxo* (Anglicè Box) should be properly applied, peculiarly and *par excellence*, to another quite different plant. These ideas have been since strengthened to certainty, since my discovery of the true *Chamæmeles coriacea*, by the assurance that it is not at all known or distinguished by any particular common name here: and indeed the plant is far too rare and unimportant as far as regards practical utility, to render it probable it should have obtained one.

Among the few plants of much importance in their domestic uses peculiar to Madeira, *Sempervivum glutinosum*, or *Ensaião* as it is called by the country-people (pronounced *In-say-oung* or *En-sai-yound*), is distinguished for the use made of it by fishermen in preserving their lines. This species, belonging to a genus which peculiarly characterizes the vegetation of this island

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as well as of the Canaries, grows in the greatest abundance on the rocks in all parts: and though particularly plentiful on the sea-cliffs, it is by no means confined to maritime situations, but occurs in almost equal abundance in the interior to a considerable elevation. All parts of the plant, but the stems particularly, are covered with a clammy viscid secretion, as if coated with moist varnish. It is probably this, chiefly, which renders the plant so useful to the fishermen in preserving their lines and defending them from the action of the salt-water. This is the account they give themselves of its use; to which may perhaps be added, the stiffness and smoothness it gives, rendering them less liable to entangle. It also, no doubt, in some measure strengthens them, and diminishes friction; and the dark colour renders them less visible in the water.

It is thus applied.—A large quantity of the plant being collected, the stems are bruised with stones (usually by children), till the bark can be readily stripped off; the leaves and young shoots or flower-stems being rejected, as, perhaps, containing a weaker, less viscid juice, which would too much dilute the rest: the bark thus collected, is pounded in a rude mortar, till its fragments are sufficiently small to allow a handful of them to be rubbed with a cloth backwards and forwards along the outstretched lines till they are well saturated with the juice: they are then coiled up, and put to steep till the following day in some alkaline liquid, (usually common urine,) when the rubbing is again repeated, if necessary; that is, if the line does not appear uniformly black and evenly coated in all parts. If when dried there still appear in it any knots or inequalities, it is put to soak in sea-water, for the purpose of softening previous to any more rubbing. When quite finished, it has become black, perfectly smooth and even, and shines as if coated with varnish, or rather with the wax used by shoemakers, whose waxed threads it much resembles,
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except that it is not at all clammy. It is also rather hard and stiff, but still perfectly flexible. Some affirm that the first rubbing with the pounded bark is sufficient, if well and thoroughly done, the others being merely to remove inequalities: while others say, that three or even four rubbings with bark are necessary. This want of agreement proves it perhaps immaterial.

Funchal, Madeira.